

Chapter 6

Conclusion

The Asian stock markets integration are both theoretically and empirically discussed on the issues concerning the measures and relationship to market quality in previous chapters. To complete the job, the discussion on the policy issues especially for Thailand and also the possibly potential study in the future is appropriate to be discussed as well. Lastly, the conclusion of this study will be drawn.

Although the improvements in many Asian emerging stock markets have been remarkable, most of these markets are still in the early stages of development. They need to close the gap among themselves and also among the more advanced capital markets, both in the same and the other regions, to be able to compete. Asian emerging markets are also increasingly competing among themselves for new issues and investors. To attract additional portfolio flows, therefore, developing markets need to address investor concerns regarding the attributes of their capital markets that raise transaction costs and risks. The important matters are the reliability and efficiency of the infrastructure and trading systems. In addition, transparency and fairness in treatment are also very important in development. By focusing on these concerns, policy makers can also reduce their own fears that the integration will increase volatility in their capital market, though it is still empirically inconclusive, and the risk of financial crisis.

Throughout the previous chapters, a set of conclusion about Asian stock market integration indicates that Asian stock markets, including Thailand, are now in high level of integration to world capital market. Both measures provided in the previous analysis, the degree of integration and the likelihood of integration, are both bounded to a certain value. The degree of integration, when squared adjusting, is bound to zero; the complete integration. The likelihood of integration is bounded between 0 and 1. In high level of integration, observed through both measures, we expect to see the reconciliation with high capital flow.

6.1. Benefits of stock market integration

Capital markets in a market economy fulfill three functions:

1. Capital markets serve as a source of long-term capital for financing investment.
2. Capital markets expand the type of financial instruments available to domestic savers. It allows risk diversification and encouraging resource mobilization.

3. Capital markets, especially equity stock markets, continuously monitor the corporate sector, serving both as a signaling device for the allocation of capital and as a means of corporate control, thereby promoting managerial and organizational efficiency. However, Blommestein and Spencer (1993) suggests that informational asymmetries, including principal-agent problems in the area of corporate control, as well as price volatility, may impede equity stock markets from correctly fulfilling their monitoring and signaling functions.

Properly functioning capital markets help increase investment by affecting both the supply of and demand for capital in several ways. First, they are a cost-efficient way to attract savings from a large group of small savers, thereby reducing the cost of capital for firms through economies of scale. Second, capital markets have two risk-sharing and diversification properties that promote the financing of riskier but higher-return investments: they reduce the vulnerability of firms to interest rate and demand shocks by facilitating the process of raising equity by firms, and they reduce risks faced by investors by easing portfolio diversification. Finally, capital markets, like banks, perform a term transformation function. Many investments require a long time span to generate returns, while investors generally wish to commit funds for a shorter period. With liquid and active secondary capital markets, both requirements can be met simultaneously, since investors feel assured that they will have access to their funds quickly and without paying an excessive price.

Financial integration enhances this role of capital markets in several ways. As explained earlier, most directly, integration expands the supply of investment resources by tapping foreign sources, increasing the demand for domestic securities. The increased demand will drive up the price of domestic securities, raising the price-earnings ratio and reducing the cost of capital. Less directly, internationally integrated stock markets allow wider risk diversification and thereby facilitate the implementation of higher-return but riskier projects as suggested by Levine and Zervos (1996). Finally, increased foreign activity improves the depth and liquidity of domestic capital markets, key ingredients for these markets to perform their term transformation function. The fact that a growing share of foreign investment is accounted for by institutional investors could magnify the positive impact on liquidity, since institutional investors are very active traders as suggested by Samuel (1996). With improved liquidity in domestic markets, investors will lower their demands for higher yields, reflecting their ability to sell securities at declining costs, and the cost of capital will decline. These favorable effects should lead to changes in the behavior of domestic agents. The declining cost of capital and the enhanced risk diversification should induce the corporate sector to issue initial public offerings (IPOs) and additional shares, including offerings and shares in emerging sectors,

such as private infrastructure projects. In addition, as liquidity in domestic capital markets improves, new domestic investors will be attracted to these markets.

Bhattacharya et al. (1997) show data that support the hypothesis of financial integration enhancing the role of capital markets as a source of investment finance. The growth in both stock market capitalization and turnover in emerging markets is correlated with the level of foreign activity, as measured by the magnitude of portfolio equity inflows. They also show that foreign activity has had significant positive spillovers to domestic activity, including the level and growth of domestic trading activity and the number of new listings. All these rises in activity in emerging markets has real and positive implications for investment and growth prospects in developing countries. While conventional wisdom based on industrial country data suggests that capital markets are not a large source of investment financing, suggested by Mayer (1989), there is increasing evidence that they are much more important for this purpose in developing countries. For example, analyzing data on the 100 largest corporations listed on the stock market in 10 developing countries during the 1980s, Singh (1994) finds that these corporations relied strongly on external sources for financing, and in particular on equity markets. This is consistent with Demirguc-Kunt and Maksimovic (1994) and Glen and Pinto (1994). In addition, there is growing empirical and theoretical support for the idea that development of the stock market has positive implications for economic growth. Levine and Zervos (1996) find a strong positive long-run empirical association between stock market development and the increase in per capita GDP. This is consistent with Atje and Jovanovic (1993).

Improvement in corporate governance

One means through which equity markets increase investment efficiency is by serving as a mechanism for corporate control. In essence, shareholders can exercise their right to change the management of the firm if they perceive that it is not acting in their best interest. In addition, investors can react to weak management performance by selling (or by refraining from buying) shares, actions that can lead to a decline in share prices. In turn, low or declining share prices can influence owners and managers to change their behavior and improve corporate performance. Indeed, underperforming firms will have share prices that are low relative to their underlying value and hence will be more vulnerable to takeovers. However, the academic literature is divided on how well the market for corporate governance works. For example, shareholders may not be able to monitor management without incurring high costs because of information asymmetries. The incentives for individual shareholders (unless their holdings are large) to incur these monitoring costs may be perverse because of the free-rider problem. It may not be worthwhile for a small investor to incur these costs because the benefits of better monitoring will accrue mainly to other shareholders.

Information vendors and analysts play an important role in reducing these information asymmetries and enhancing the effectiveness of the market as a means of corporate control.

Another issue widely discussed in the literature is whether the principal-agent problem improves or worsens as institutional investors come to account for a larger share of a firm's market capitalization. Samuel (1996) is one of the literature discussed this issue. Some authors believe that institutional investors, with their strong professional background, will be able to monitor corporate performance effectively. On the other hand, their incentives to monitor management behavior may not be strong because they turn over their portfolios quickly. In addition, the free-rider problem mentioned earlier can also affect institutional investors, given prudential regulations that limit the concentration of the portfolios of institutional investors in an individual firm. According to Samuel (1996), the evidence, based on U.S. data from the 1980s, is that there is no discernible effect of institutional ownership on corporate performance. But that the monitoring activities of institutional investors may be functioning as a substitute for the disciplinary role traditionally played by the providers of debt financing. However, these empirical analyses do not capture the full impact of the recent sharp increase in shareholder activism by institutional investors, which in some instances has forced key firms in the United States and some European countries to improve their structures for corporate governance.

This discussion suggests that increasing foreign participation in domestic stock markets in developing countries would have both negative and positive implications for corporate governance. On the negative side, overseas investors, because of information asymmetries, would seem to lack the familiarity with local conditions needed, to be effective monitors of management. In addition, foreign, especially institutional, investors may not have strong incentives to participate actively in corporate governance functions; they may be more interested in liquidity (if unhappy with performance, they sell) than in control. On the other hand, the nature and objectives of foreign investment change as emerging markets mature. During the period in which foreign investors follow an index-based approach, they take little interest in the underlying companies. But as they become more selective and pick stocks more carefully, they may take a more active role in corporate governance. In addition, to attract increased foreign funds, and as foreign practices are adopted by domestic shareholders, financial integration may lead domestic companies to improve corporate governance.

Preventing an increase in volatility

If stock market is to function as a signaling device for the allocation of capital, information markets need to work efficiently so that asset prices reflect all material information. Obvious impediments to efficiency are lack of information, delays in its dissemination, information asymmetries among market participants, and weak analytical capacity of market participants. Kyle (1984) has argued that the potential to make a profit in the stock market on the basis of new information promotes research by market participants. But this self-correcting mechanism seems to work best in active and liquid markets, where the potential for profit is higher. Another impediment to efficiency is volatility in asset prices, which makes it difficult for market participants to distinguish whether changes in equity prices are due to noise or to new material information on fundamentals such as dividends or interest rates. Another source of volatility and inefficiency comes in the form of speculative bubbles, which Stiglitz (1990) defines as asset prices departing from values justified by fundamentals because of expectations about future additional price increases. Volatility and lack of information may feed on each other. Without information, some investors and market makers are less likely to make bets against the market, a fact that could exacerbate price movements.

In theory, financial integration has both positive and negative implications for the price discovery process in domestic capital markets. On the positive side, foreign investment increases depth and liquidity in domestic capital markets, thereby reducing volatility. The shallow markets are more prone to volatility since even small trades in these markets have a disproportionate effect on prices. In addition, increasing foreign participation in domestic capital markets may induce improvements in accounting, information, and reporting systems, as well as increase the analytical sophistication of the domestic securities industry. There is, in fact, strong anecdotal evidence that this spillover effect of financial integration has been quite important in some developing countries. These two benefits should interact and reinforce each other: improved liquidity and profit-making opportunities should lead to increased research and better information systems, which in turn should provoke additional investor interest and activity.

On the negative side, however, other factors suggest that financial integration may lead to an increase in the volatility of domestic asset price and returns. This is because, with financial openness, domestic capital markets are exposed to new external financial shocks (or these shocks may be transmitted more quickly across borders), such as changes in global interest rates, spillover effects from foreign stock markets, and investor herding. Some of these external shocks, particularly changes in global interest rates and certain stock market spillover effects, make asset prices and returns more volatile by affecting the fundamentals of an emerging market. But other shocks, such as

investor herding and pure contagion effects, may change investment in a country even though its fundamentals are unaffected. These shocks are often the result of foreign portfolio investors having little access to information, worsening information asymmetries. Perversely, the improvements in liquidity noted earlier may make emerging markets more susceptible to external financial shocks, since better liquidity reduces transaction costs and makes it easier for foreign investors to open and liquidate positions. Given the high share of foreign investors in the major emerging markets, these potential external sources of volatility are important.

Information asymmetries may also increase volatility through interaction effects between domestic and foreign investors. For example, a defensive reaction by local investors to the sale of domestic securities by foreign investors, who in turn are responding to events overseas, may magnify the impact of foreign stock market spillover effects on the domestic market. Since local investors generally do not know why foreign investors are changing their holdings of domestic securities, they may react to such changes even though the fundamentals of the domestic markets have not changed. Similarly, information asymmetries could result in foreign investors magnifying the impact of the behavior of domestic agents.

6.2. Policy Issues

One thing that we have to take into consideration before we go further in detail about the policy making is that the effective policy in promoting the domestic capital market must lead to portfolio inflows from foreign investors. However, regulatory changes which appear comprehensive to those investor may have little impact on the functioning of the capital market if they fail to lead the capital inflows. Moreover, some policy can be forecasted by investors in advance, though there is no evidence in implementation, while some will not be efficient though effectively implemented according to investors' perception. Bekaert, Harvey, and Lumsdaine (1998) suggested that the matching of documented timing of regulatory changes with the dating the integration effect does not work. They introduce the new methodology in dating the integration by specifying a reduced form model for a number of financial time-series, such as equity returns and dividend yields, and search for a common break in the process generating the data. The outcome of their methodology is that the time that break the degree of integration which do not always correspond closely to the date of official capital market reforms. This implies the inapplicability of simple event study in this more internationally complicate problems in dating the market integration.

6.3. The need for capital inflow

Back to the normal background of why countries need foreign capital inflow. Let's consider this situation. A firm operating in a closed economy faces a high cost of capital, which includes both cost of equity and cost of debt from domestic investors. The domestic investors, in closed economy, are not allowed to diversify their portfolios internationally. Thus, firms that want to raise their capital will have to offer high expected rate of return to domestic investors in order to convince the investment. If the regulations that prohibit the international investment are relaxed, which cause the change in the degree of market integration, firms that need the additional capital are able to access a new pool of investors. On the other hand, domestic investors can also diversify their portfolios internationally. They will require less expected rate of return. As a result, the cost of capital will likely decrease. In macro level, when cost of capital decrease, more investment projects will become feasible with positive net present value. This will lead to higher economic growth. Henry (1997b) analyzed this issues empirically.

Although countries require capital inflows from foreign investors as discussed earlier, the quality of the inflows is another side of a coin. The financial crisis, more or less, can be caused by sudden capital flight as faced both by Mexico and Asian countries. In fact, foreign investors have made a significant contribution to emerging markets liquidity. Some figures concerning this issue for Thailand can be provided to make it clearer. In 1986, the year preceding its capital inflow episode, foreign investors accounted for 8 percent of the trading turnover. By 1990, they accounted for 15 percent of turnover in Thai stock market. This share declined during 1991 - 1992, but rose again to 26 percent by 1995 and to about 32 percent in 1996.

Up until now, the stock market integration is analyzed in term of domestic listing with incoming investor. Another possible approach to gain capital inflow is that cross-listing in other stock markets. Many developing country firms have now been able to to the cross-listing in the world's major stock market through global and American depository receipts (GDRs and ADRs respectively). This is another end of the grid in policy making consideration.

6.4. The challenges of integration

If a stock market is more integrated to world capital market, what should that market prepare for. This is what should be asked for each country in this international environment. Some idea on this focus may be worth discussing.

Increasing competition

Although a market will be beneficial if it becomes more integrated to world capital market, it will face the competition with other countries at the same time. The competition can be the competition to list the stock and be abided by the exchange's regulation. As noted earlier, the growth in these alternative means of channeling funds to developing countries has been enormous. By the end of 1998, ADRs and GDRs represents 6 percent of the underlying market capitalization of the IFC Emerging Market Investable Index. In fact, the success of ADRs and GDRs is explained in part by the weaknesses of developing country capital markets. Weakness in these markets may cause foreign investors to acquire shares of a developing country firm through depository receipts rather than directly, particularly if transaction costs and delays in the market are high or investor protection is poor. The challenge in this competition is to develop in its mechanism to meet the regulatory standards of the industrial country where they are issued. Such development will gain the reliability from foreign investors.

Addressing investor concerns

To compete in an increasingly integrated world, Asian stock markets, including Thai stock market, need to make their markets more attractive to foreign investors. Normally, investors are concerned about the unreliability of emerging markets in three main areas.

1. Market infrastructure that results in delays in settlement and failed trades
2. Lack of protection for property rights, including those of minority shareholders
3. Lack of transparency and fairness of markets, because of insufficient disclosure of accurate information that would enable investors to assess the merits of alternative investments and because of insider trading and other abusive practices.

It could be seen that, in Asian stock markets, all of these concerned aspects are now improved rapidly by those countries. Despite recent progress, another concern may be the illiquidity relatively to industrial markets. In an illiquid market, investors fear they will not be able to liquidate their interests quickly without incurring a substantial loss.

The concerns of developing countries

Certainly, policymakers in Asian stock markets also have a number of concerns about growing international integration. The volatility of the market might be one of the most concern in this case. From the empirical results, it can be argued, more or less, that the higher degree of integration

might cause Asian stock markets more susceptible to external shocks. In addition, foreign investors may add to excess volatility in asset prices in Asian stock markets through herding behavior or contagion effects. Policymakers are also concerned about the increasing vulnerability to financial crises as foreign investors become more important in both trading activity and market capitalization. Because of herding, fads, or momentum trading, foreign investors may increase the likelihood or magnitude of market bubbles, with securities prices rising far above the underlying fundamentals, followed by an inevitable market crash as we have seen.

Another concern is the equity implications of increasing foreign ownership of domestic assets. The perception of foreign portfolio investment is that the interest is in benefiting from large short-term capital gains and dividends but contributing little to the long-run health of domestic firms and the development of the economy and selling at the first hint of trouble. Another perception of foreign portfolio investment is that the asymmetric information between foreign and domestic investors. Because of foreign investors' wealth, they may be able to buy a large share of the equity of domestic firms, to the detriment of long-term national income.

As clearly accepted, integration and globalization are raising new issues for capital market regulators in every country. Integration increases systemic risk, since the failure of a financial intermediary overseas could have an impact on domestic markets. In addition, globalization may reduce the effectiveness of monitoring and supervision of financial intermediaries because of difficulties in assessing the financial status of firms that are active in many markets, and because of potential gaps in the responsibilities of regulators in different countries.

6.5. The policy agenda

In summary, countries will be able to benefit from increased investment, and from the deepening and improved liquidity of their capital markets, only if they put in place the institutional and policy prerequisites to attract capital inflows, and reduce the risks of instability. Three main tasks must be considered.

1. The stock market must be made more attractive to foreign investors. While investors are attracted by the potential for rapid growth and high returns, they are discouraged by operating inefficiencies and lack of reliability of market institutions and infrastructure, and by the regulatory frameworks that increase transaction costs and reduce transparency.

2. The reformation and strengthening institutions to reduce the risks of instability must be implemented. Improvements that increase the attractiveness of stock market for foreign investors also serve to reduce volatility and risks.
3. Authorities need to deal with the new regulatory concerns resulting from globalization. These concerns are shared by industrial countries, and their resolution will be greatly facilitated by international initiatives.

These reformation in institutions and policies are not only prerequisites for successful market integration but are also essential to develop stock markets in a more close economy. Domestic and foreign investors generally share the same concerns, and hence both would welcome the same institutional and policy improvements. Similarly, measures that reduce volatility and risks that originate from foreign shocks would generally also be beneficial for domestic sources of volatility. Market integration increases the urgency of these reforms.

6.6. Policy implication from empirical work

Regarding the empirical results from chapter 4, and 5, some comments concerning the policy making for stock market can be provided. From the estimation of the degree of stock markets integration and the likelihood of stock market integration, it could be concluded that Thailand is integrated to world capital market moderately, relatively to the other Asian stock markets. However, this does not imply that Thailand is not in high level of stock market integration to world capital market in absolute term. As discussed earlier, all Asian countries experienced high level of stock market integration to world capital market. However, when comparing to the developed countries, the emerging ones are still in relatively lower integration level than those developed countries. In term of the relationship between the quality of stock markets and the level of stock markets integration in Asia, the only long run relationship could be claimed to exist. However, the direction of the relationship may be explained in term of conjectures which have been discussed earlier. The more systematic using quantitative method to explore the direction of the relationship might be possible for future study.

The capital flow, which is expected to be one of the causes of the level of stock market integration¹¹, is what we need to carefully consider. It cannot be rejected that the recent Asian economic crisis comes from such "inappropriate" capital flow, at least partly. The deeper study in the

¹¹ Although it is expected to see the causality between the stock market integration and the capital flow, the empirical study concerning the relationship between them is still interesting to do. The study of the precedence between them might be preliminary appropriate.

capital flow may shed clearer insight in this concern. However, the empirical results from this study might help us bring up some issues concerning the policy in stock market liberalization. If we hope that the higher degree of market integration will induce the capital flow, we need to consider at least two aspects. Firstly, how good of the inflow from foreign investors. In this aspect, the good inflow should be the flow that will not hurt the economic system by sudden flight out of country. The second consideration is that if the higher degree of market integration is really benefit to country in term of market liquidity; which will eventually lead to economic growth as analyzed by Levine and Zervos (1998), and etc.; we still have to recognize that this is the equilibrium results. The short run effects may be the other way around according to other observable and unobservable factors.

6.7. Thailand at a glance

Thailand is categorized as moderately high in level of stock market integration to world capital market as suggested by the empirical results in the previous chapters. The likelihood of market integration is stationary in the period of 1990s as reported by unit root test. The benefit of market integration is widely discussed at the beginning of this chapter. It is argued that another benefit of market integration could be considered in term of productivity. Detail in this issue is discussed in appendix C. According to the previous findings, it is found that the level of market integration in Asian stock markets increase over the period 1980s, including Thailand. Alba et al. (1998) report that Thailand experienced the huge capital inflow during the beginning of 1990s. Thus, the higher investment level in Thailand should be observed since 1980s, if the argument is valid. It is found that during 1980s, the slightly upward of the investment index¹² can be observed. The investment level in Thailand is quite stable after the period of 1980s. It drops during the Asian financial crisis. The possible explanation is that during the 1980s, most findings confirm that Thailand, similar to those in Asia, experienced the increasing level of integration. This may be consistent with the increasing in the level of domestic investment. During the period of 1990s, the investment level is quite stable which is consistent with what is argued previously. In 1990s, Asian stock markets, including Thailand, seems to reach high level of integration and always stay high throughout the period. This might be able to reconcile with the quite stable level of investment in Thailand except the period of Asian financial crisis. The period of crisis could be explained as the abnormal period. To see clearer, it has to be for further investigation around the period of the recovery after this current situation.

¹² The investment index is provided by Bank of Thailand (BOT). It composes items that affect investment activity such as the construction areas permitted in municipal zone, domestic cement consumption, iron rod sales, domestic credit outstanding, imports of capital goods, capital investment of business registered at the ministry of commerce, promotional privileges from Board of Investment (BOI), etc.

The inflow from foreign countries to Thailand can be categorized into three main sources. They are Asia and Australia, United States, and Europe. The major inflow is from Asia and Australia which is more than 60% of the total portfolio inflow. As it can be imagined that almost all of the portfolio inflow is from foreign institutional investor, it is still interesting to investigate in detail concerning the real source of that flow. This is another issue about the source categorizing problem and the real effect of foreign institutional investors over Thai stock market.

6.8. Conclusion

This study investigates the Asian stock markets integration for various aspects; the definition of the market integration, how to measure the degree of stock market integration, the likelihood that the market will integrate to world capital market, the relationship between degree of Asian stock markets integration and the quality of markets in term of liquidity and volatility, and the policy issues concerning the market integration. The methodology employed in this investigation are the maximum likelihood estimation based on Conditional Capital Asset Pricing Model (CCAPM), the Granger causality, and the cointegration technique. The observed time-series data comes from seven Asian countries. They are Hong Kong, Korea, Malaysia, Philippines, Singapore, Taiwan, and Thailand. Also, U.S. stock market and world capital market are analyzed simultaneously to be benchmarks. The period of the time-series spans over January 1990 and December 1999.

The findings indicate that the Asian stock markets excess return and the excess return of world capital market exhibited the same trend. The excess return in stock markets investment has been downtrend since the middle of 1991. In some period the realized excess return was negative such as the excess return during the period of late 1993 to the middle of 1995. However, after the period of Asian economics crisis, there has been a recovery sign of the excess return from Asian stock markets investment since the second quarter of 1999. The volatility of the excess return from Asian stock markets seems to fluctuate during the period of Asian economics crisis.

Hong Kong and Singapore in this investigation are categorized as non-emerging Asian stock markets. The finding from the estimation of degree of stock market integration indicates that it is not necessary that the developed stock market integrates to world capital market higher than the emerging one. They, recently, all seems to have quite high level of stock market integration to world capital market. It could be concluded that the findings from this study are consistent with the previous ones, for example, Bekaert and Harvey (1995), Cumby and Khanthavit (1992). The Asian stock markets became more integrated to world capital market during the period of 1980s. In 1990s,

it seems to reach high level of market integration. Another interesting aspect in term of degree of stock market integration is that there is no obvious evidence to indicate the change in the degree of stock market integration relating with the Asian economic crisis, except for Malaysia in particular period. Malaysia imposed very tight control during that period in order to avoid the negative effects of foreign speculators.

The different idea in estimation the degree of stock market integration and the likelihood of stock market integration, though both lies on the CCAPM, is that while the measuring of the degree of stock market integration assumes the local market to be integrated to world capital market without investment barriers, the measuring of the likelihood of stock market integration does not. It provides the measuring of "weight" of the local and global factors that affects the expected return on local stock market. Although the results from the two approaches do not strictly confirm each other, they do not counter each other, either. The measure of the degree of stock market integration seems to be more sensitive to any event than the measure of the likelihood of stock market integration. The measure of the degree of stock market integration seems to capture the "jump" or "shock" in pricing more than the measure of the likelihood of stock market integration. However, it could be argued that Asian stock markets seem to have high level of integration to world capital market, regardless the methodology employed in measuring. Although it is seen that the degree and the likelihood of stock markets integration is "reverting" to integration, it is completely time-varying according to the unit root test.

In the study of relationship between the level of Asian stock markets integration and the quality of stock markets in term of liquidity and volatility, there are some interesting findings. The Granger causality analysis between the level of market integration, no matter what the degree or the likelihood, and the quality of stock market, the liquidity and volatility, shows no strong evidence in the precedence. This might be due to no precedence between these two things or the other way around, the simultaneous effects. It might be a kind of "chicken and egg problem". Another technique in the relationship study is the cointegration test. The cointegration technique is quite appropriate to deal with the non-stationary series, as found in this study for the level of market integration and the proxies of stock market quality using unit root test. It provides the test of equilibrium relationship among a set of non-stationary variables. This implies that their stochastic trends must be linked. From the cointegration test between the series, it is found that there exists the long run relationship between the level of Asian stock markets integration and the quality of stock markets in term of liquidity and volatility. However, the likelihood of stock market integration for Malaysia and Thailand are found to be stationary, then it could not be applied with this cointegration test.

The policy issues in this paper, though not provide the recommendation on any policy making, are written to figure out the things that should have been considered and prepared in case of facing the gradually integrated world capital market. The stock market infrastructure such as trading system, clearing and settlement facilities, etc. and transparency seem to be essential factors for not only market integration preparation but also the development of stock market, even in closed economy structure. Good and appropriate infrastructure in stock market might convince the capital inflow and also lead to better efficiency of stock market.

Certainly, the study on the stock market integration will not end up at this moment. On the other hand, the study in this area continues to be wider and deeper. One possible study next in the line might be the study that could resolve the problem due to the existing methodology. As it is shown by Bekaert, Harvey, and Lumsdaine (1998) that the focus on returns, which are employed in this investigation, may not capture the permanent price effects that market integration entails as well as other variables, the other times-series data such as dividend yields, net equity capital flows, etc. may be introduced in further research. The methodology employed is an another consideration in the next studies. Asset pricing models may be too rigid for grabbing the price differential between markets. Bai, Lumsdaine and Stock (1998) introduce the new technique to find endogenous break points for the VAR parameters which seems to be able to apply in this estimation of structural breaks in case of time-varying degree of integration.

However, the degree of stock market integration itself is not the substance of the interest, though essential. The application of the measures is more interesting as appeared in gradually increasing number of literatures. Not only the micro level of economy; for example the quality of capital market; but also the macro level of economy; for example, growth of domestic economy; is certainly important. Further investigation in this area is still possible and necessary for development of the overall economy, both domestic and international level.